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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,332	MEIN, GRAEME	
	Examiner	Art Unit	
	KRISTEN C. HAYES	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3, 4, 6, 8, 9, 11-14, 17-20, 26-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 4, 6, 8, 9, 11-14, 17-20, 26-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3, 4, 6, 8, 9, 11-14, 17-20, 26-29 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. The specification does not disclose the property of extracted milk detected by the sensor being matched with the extraction element from which the milk was delivered.

4. Claims 1, 3, 4, 6, 8, 9, 11-14, 17-20, 26-29 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. It is not understood how the sensor matches the property of the extracted milk with the extraction element from which the milk was delivered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4, 6, 9, 11, 12 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Nordegren et al. 4,011,838.

3. Regarding claim 1, Nordegren discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (4-7, 16, 36-39), a collection line (12), the sensor apparatus including: a sensor (14) forming a serial extension of the collection line adapted to detect the presence of a particular compound within the milk extracted (Nordegren, column 5: lines 38-39), a controller (16, 36-39), whereby activation of the extraction elements is controlled to prevent the at least one sensor being exposed to extracted milk supplied from all the extraction elements at one time (Nordegren, abstract: lines 14-17), wherein the sensor apparatus is configured such that the property of the extracted milk detected by the sensor is matched with the extraction elements from which the milk was delivered (as best understood) (Nordegren, column 5: lines 38-39).

4. Regarding claim 3, Nordegren further discloses the extracted milk supplied by an extraction element is foremilk (in that the first milk drawn from the udder would be foremilk).

5. Regarding claim 4, Nordegren further discloses the extraction element being formed from a single teatcup (4-7 can be used independently) associated with an independent pulsator line (48-51) of pulsation system.

6. Regarding claim 6, Nordegren further discloses a single collection line (12) collects all milk delivered from a single animal.

7. Regarding claim 9, Nordegren further discloses a controller formed by a pulsator (36-39) controller of the pulsation system.

8. Regarding claim 11, Nordegren further discloses a single extraction element being pulsated at one time (Nordegren, abstract: lines 14-17).

9. Regarding claim 12, Nordegren further discloses a pair of extraction element being pulsated at one time (Nordegren, abstract: lines 14-17) (If the extraction elements are capable of being operated one at a time, they are capable of being operated two at a time)

10. Regarding claim 26, Nordegren further discloses the extraction elements being sequentially activated by the controller (Nordegren, abstract: lines 14-17).

11. Regarding claim 27, Nordegren further discloses activation of each teatcup by pulsation in the teacup by a cyclic change in air pressure applied by the pulsation system (in that this is inherent in operation of pulsators).

12. Regarding claim 28, Nordegren further discloses a threshold level of air pressure for activation of each teatcup above which extracted milk is delivered to the single collection line (Nordegren, column 7: lines 26-38). (In that when enough pressure is applied, the teatcup will activate, massaging the teat to milk the cow).

13. Regarding claim 29, Nordegren further discloses a teatcup being pulsated by a cyclic change in air pressure below threshold level (Nordegren, column 7: lines 26-33).

14. Claims 1, 8, 17-20 and 30-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Van den Berg et al. US 6,823,817 (hereinafter Van den Berg).

15. Regarding claim 1, Van den Berg discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (2), a collection line (Van den Berg, Figures 1, 2), the sensor apparatus including: a sensor (12) forming a serial extension of the

collection line adapted to detect the presence of a particular compound within the milk extracted (Van den Berg, column 5: line 25, lines 39-40), a controller (13) configured to control the activation of the extraction elements during a pre-determined period of milking the animal (in that if the controller is capable of deactivating the extraction elements, it is capable of activating them, Van den Berg, column 8: lines 21-22), wherein the sensor apparatus is configured such that the property of the extracted milk detected by the sensor is matched with the extraction element (as best understood) (Van den Berg, column 7: line 63-column 8: line 6).

16. Regarding claim 8, Van den Berg further discloses the sensor measuring electrical conductivity (Van den Berg, column 5: line 45).

17. Regarding claim 17, Van den Berg further discloses an indicator adapted to receive an output signal from the sensor and issuing an alarm signal indicating abnormal milk has been delivered from an extraction element (Van den Berg, column 8: lines 50-55).

18. Regarding claim 18, Van den Berg further discloses a diversion system (15) associated with the indicator to isolate abnormal milk.

19. Regarding claim 19, Van den Berg further discloses the milk abnormality being detected through a comparison between sensor output signal indicating the detected property of the milk extracted from an udder quarter or half of the dairy animal by an extraction element and the sensor output signal indicating the detected property of the milk extracted from other quarters or half of the same udder by an alternative extraction element (Van den Berg, column 7: line 63-column 8: line 6).

20. Regarding claim 20, Van den Berg further discloses a rolling average of sensor readings being used to detect abnormalities in extracted milk (Van den Berg, column 7: lines 1-10).

21. Regarding claim 30, Van den Berg discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (2), a collection line (Van den

Berg, Figures 1, 2), the sensor apparatus including: a sensor (12) forming a serial extension of the collection line adapted to detect the presence of a particular compound within the milk extracted (Van den Berg, column 5: line 25, lines 39-40), a controller (13) configured to control the activation of the extraction elements during a pre-determined period of milking the animal (in that if the controller is capable of deactivating the extraction elements, it is capable of activating them, Van den Berg, column 8: lines 21-22), wherein the sensor output signal indicates the detected property of the milk extracted from other quarters by an alternative extraction element (Van den Berg, column 7: line 63-column 8: line 6).

22. Regarding claim 31, Van den Berg further discloses the sensor measuring electrical conductivity (Van den Berg, column 5: line 45).

23. Regarding claim 32, Van den Berg further discloses an indicator (Van den Berg, column 8: lines 50-55).

24. Regarding claim 33, Van den Berg further discloses a diversion system (15).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nordegren in view of Rubino US 4,572,104.

27. Regarding claim 13, Nordegren discloses a controller (16, 86) and a drainage delay period (Nordegren, column 8: lines 22-25) but does not disclose the period being between

activation of different extraction elements. Rubino teaches a drainage delay period between activation of different extraction elements (Rubino, abstract: lines 1-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nordegren by providing a drainage delay period (as taught by Rubino) so that milk received from one extraction element did not contaminate milk received from another extraction element.

28. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nordegren in view of Seaborne US 6,170,434.

29. Regarding claim 14, Nordegren further discloses a controller (16, 86). Nordegren does not disclose the extraction element initially activated by a controller being selected randomly. However, this technique is known in the art, as disclosed by Seaborne (Seaborne, column 1: lines 32-35). It would have been obvious to one of ordinary skill in the art to select the first extraction element of Nordegren randomly, as taught by Seaborne, so that the same extraction element would not continually be activated, which could cause incorrect readings (i.e., an error in one specific extraction element).

Response to Arguments

30. Applicant's arguments filed with respect to the rejection of the claims under Nordegren have been fully considered but they are not persuasive.

31. The sensor apparatus matching the property of the milk detected by the sensor with the extraction element is not an inherent function of the sensor apparatus. One of ordinary skill in the art would not take the information disclosed about the sensor apparatus and conclude that it was able to match a property of milk to the extraction element of a particular teat. Furthermore, it is not understood how the sensor apparatus performs this function.

32. The new limitation of claim 1, discussed in the 112 section above, is seen as a functional limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

33. Nordegren is also seen as controlling the extraction elements during a pre-determined period of milking the animal so that the sensor is exposed to milk from only one element at a time. This is seen as a functional limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

34. In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

35. Van den Berg is seen as disclosing a sensor (12) in a single collection line (seen above the reference indicator “Figure 2”) which collection lines (4) merge into.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTEN C. HAYES whose telephone number is (571)270-3093. The examiner can normally be reached on Monday-Thursday, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571)272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCH
21 January 2010

/Rob Swiatek/
Primary Examiner, Art Unit 3643
29 January 2010